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TEXTILE NUMBER

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TEXTILE INDUSTRY

Indian Textile Industry dates back to Indus Valley Civilisation. Down the centuries, it has won the admiration and support of many a country all the world over. Dacca Muslin was the dream of ages. The factory system was a turning of the tide in the history of textile industries.

Almost entirely as a spinning enterprise mill industry started its career. Lancashire was a nightmare to us. But Swadeshi movement gave a new fillip to our native goods. And today it is the biggest industry in India, employing over eight lakhs of workers. It has a turnover of Rs. 400 crores. India occupies a second place second only to the United States in cloth production.

1959 is not a bad year for the textiles. World cotton consumption set up a new all time high. 30.5 million bales were consumed and the accent was greater in U.S.A., Western Europe and Far East. The per capita consumption in United States is about 26 pounds. The current upswing is greater in Western Europe. Textile production in Far Fast is phenomenal, Japan taking the lead. In tune with the general rise in tone, India also kept up her pace and has reached a new record of 4.5 million bales.

The last ten years witnessed a tremendous growth in Indian cotton textile industry which accounts for about 35% of the total industrial output of the country.

In 1947, there were only 388 mills with 10 million spindles and 2 lakh looms. Today there are 482 textile mills and the total spindleage is 13.40 millions. Production of yarn and cloth are steadily increasing.

Handloom and Khadi industries have increased their production from 1,198 million yards of handloom cloth and 6 million yards of Khadi in 1949 to 1,820 million yards of handloom and 64 million yards of Khadi in 1958. This is tremendous progress. From an importer we have become exporters: our textile exports average 750 to 800 million yards of mill-made cloth.

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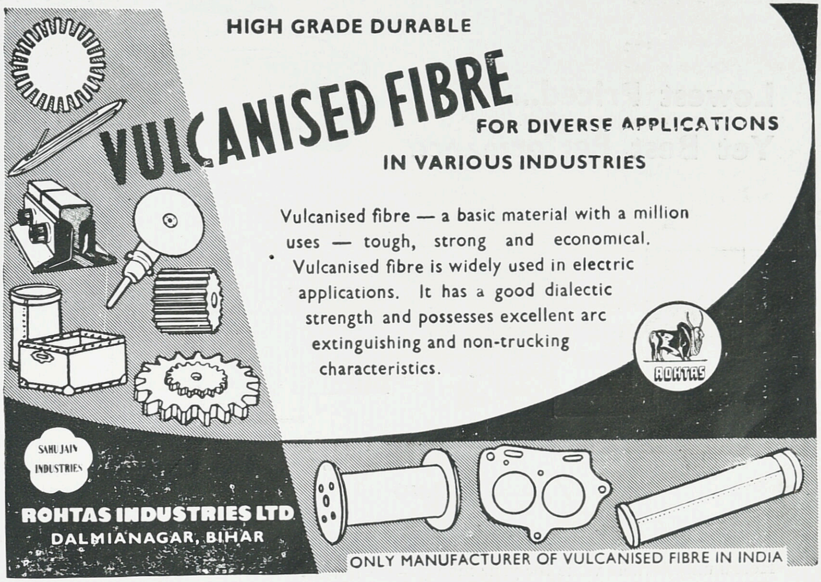

In textile machinery manufacture, we are doing our best. Spindles, ring frames, plain looms, carding engines, textile stores, etc., are now produced here. We have also commenced manufacturing automatic looms, draw frames, and wet process machinery. By the end of Third Five-Year Plan, we will attain the stage of self-sufficiency.

Powerloom establishments having within their premises 25 powerlooms or more, whose cotton cloth is exported, will, against exports of their cloth, be eligible to recover 2/3rds of the F.O.B value of such exports as their entitlement for import of raw cotton, from July 1959.

An agreement under PL 480 for the import of three lakh bales of cotton has been signed with U.S.A.

To encourage production of long staple variety, the Government of India have decided to refix the ceilings for long staple cotton of staple length 1—1/32'' and above.

The Indian standards Institution has issued a standard method for detection and estimation of damage in cotton fabrics due to micro—organisms. It has published a standard glossary of textile terms (IS: 232—1958), prescribing definitions of terms commonly used in the cotton, wool, jute and silk industries. The standard has been prepared in order to eliminate ambiguity arising from local interpretations of textile terms and to establish a generally recognized usage. Separate standards covering terms commonly used in the man-made fibre industry have already been issued.

The Third Plan is on the anvil. Handlooms and Mills are the prime sectors of the textile industry. The Mills wanted that the target for them should be fixed at 7,600 million yards. But Kanungo and Karve Committees have pegged this figure to 5,000 million yards. But in 1957 the mill cloth production stood at 5,306 million yards. And there was a glut in the market. The Joshi committee rightly said that the per capita consumption should not go beyond 17.5 yards at the end of the Second Plan. All India Handloom Board also fixed mill production at 5,000 million yards, including exports.

The Indian Cotton Mills Federation estimates the total requirements of the country by 1966 at 9,600 million yards and pleads that mill sector should be allotted 6,300 million yards. The Handloom interests demand that mill cloth production should be pegged at 4,000 million yards for internal consumption and any quantity for exports.

A Tripartite conference representing Government, Mills, Handlooms alone can solve these problems.

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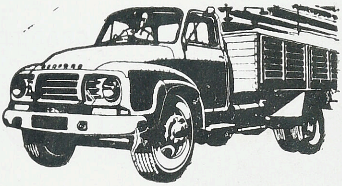

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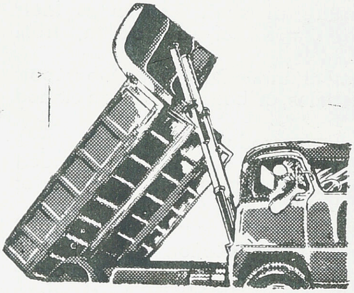

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In this most illuminating article, our versatile Minister makes a powerful plea for extracting maximum advantages under conditions of handicap.

THE INDIAN COTTON TEXTILE INDUSTRY

MANUBHAI SHAH

Union Minister of Industry

The growth of the Indian cotton textile industry, especially during the last decade, has been remarkable both in its volume and in its speed. The Indian mill industry is today one of the biggest organised industries of the country, one of the largest cotton textile industry in the world and accounting for about 35% of the total industrial output of the country. Prior to Independence, i e., in 1947, India had 388 cotton mills with about 10 million spindles and 2 lakh looms. Today the industry has 482 mills and a total spindleage of 13.40 million. The trend in the production of yarn and cloth by mill industry has been upward at 1,447 million lbs. and 4,319 million yards respectively in 1948 to 1,780 million lbs. and 5,317 million yards respectively in 1957, the highest recorded figure for the industry. That production of yarn and cloth has been steadily increasing despite the fact of the Partition of India in 1947 which resulted in a considerable acreage under improved strains of cotton going over to Pakistan, is an achievement indicative of the inherent strength and sustaining power of the Indian cotton textile industry.

The handloom and the khadi industries have also increased their production from 1,198 million yards of handloom cloth and 6 million yards of khadi in 1949 to 1,820 million yards of handloom and 64 million yards of khadi in 1958. The handloom industry gives employment to 1.5 million families and the khadi industry gives part-time, seasonal and full-time employment to about 1·1 million families.

Exports

As an exporter of cotton textiles also, India has forged ahead. From an importer of foreign cloth—and we remember our bonfires of foreign cloth in the pre-Independence struggle days—we are now exporting on an average 750 to 800 million yards of mill-made cloth,

although there was a decline in 1958 to 587 million yards, brought about mainly by certain international factors and to some extent by domestic developments affecting the textile industry. The chances of exports of cloth again moving above the 750 million yards mark per year are bright so far as the years 1959 and 1960 are concerned.

The industry today is catering to the bulk of the domestic demand for cloth and also has been exporting considerable quantities of its production. The continued growth of the industry which has registered such a remarkable progress and which has a vital stake in the economy of the country, depends to a very large extent on the enlightened approach which the management, technicians and labour bring to bear upon the problems facing the industry.

Cotton Consumption

The consumption of cotton has increased from 35 lakh bales in 1948 to 50 lakh bales in 1958 of which 6 lakh bales are imported and about 44 lakh bales are of indigenous production. The indigenous production of cotton has increased from 18 lakh bales in 1948 to about 45 lakh bales in 1958.

Modernisation

"No major improvement in quality or reduction in cost is possible without adequate modernisation of the industry as a whole." A large majority of the machines in existence today were installed more than 40 years back and have outlived their usefulness Far-reaching technological developments have taken place in the sphere of textile manufacture. India as on the largest producers of cotton textiles should necessarily keep abreast with these developments if the industry is to hold its place in a world of growing competition and against the background of new synthetic fibres. On the speed with which the old and worn-out machines are replaced would depend the pace of effecting improvement in the quality of the cloth produced in India.

No industry, however well-organised it may be, can, in the long run, be conducted on efficient and economic lines unless the changes in consumer demand for its products are adequately studied, recognised and catered to. Viewed in the broad economic context of the higher rate of development expenditure in the the last few years, it is difficult to accept an argument that is occasionally put forward that the market for cloth has shrunk. The reasoning behind this view probably stems from a study of the per capita consumption derived by relating production to the quantum of offtake at particular points of time.

Capacity of the Industry

Many comments are now-a-days based on the observations of the Joshi Committee. If I may say so, these observations which are often quoted by some, are being torn out of context. The Joshi Committee has only assessed the rate of demand in the next few years in the overall context of national economy. It has not been observed by the Committee that the industry is not capable of producing more or that its production has been frozen or pegged. The Indian Textile Industry, as it stands today, can produce over 6,000 million yards and more, if necessary.

Shift in Consumer Demand

As against this essentially short-term view is the picture of a potentially enlarging demand for cloth which will be generated within the country as the industrialisation and economy of the country takes further strides with its resultant increase in the purchasing power of the people as a whole. There has been an unmistakable shift in the pattern of consumer demand which is more and more for cloth of improved quality and in processed condition with better finishes. Shaping the pattern of production in accordance with the consumers preference is as vital for keeping up and enlarging demand as it is for effectively competing in the international markets for textiles. Improvement in the quality and reduction in cost are not, in the ultimate analysis, two seperate problems, but only two sides of the same problem, viz., *technological improvements in production*. Without improvement in quality,

demand cannot be sustained or improved upon; and without a sustained and improved demand for the goods, a reduction in cost would be difficult of realisation.

Present Position

Conditions as regards stocks of cloth with the mills have improved notably. Stocks of cloth with mills, both sold and unsold, stand now at a little over 300,000 bales. This has been a remarkable change from the position as it obtained in 1957 and 1958 when there were considerable accumulation of stocks with the mills. On the export front also, conditions have turned for the better as compared to last year. One disturbing factor which has of late caused some concern has been the apprehension over inadequate availability of cotton owing to fears of comparative reduction in the outturn of the crop this year, with the result that prices of Indian cotton have registered a sharp upward trend. Several steps have been taken and are being taken to halt this trend. Government on its part has given a categorical assurance that production to meet the full needs of the Indian economy, both for internal consumption and extarnal demands (exports), will not be allowed to suffer for lack of cotton supplies. It is to be hoped that with this assurance, the Industry should be in a position to adjust matters in such a manner that neither cloth production nor the improved trend in exports of textiles receives any setback.

I would here like to invite the co-operation of the industry, the cloth trade and the press. We all have to work in harmony. The trends, as and when discovered or noticed, may be reported or commented upon with full understanding of their wider impact and wider audience. A sense of scare will help none. From a cry of glut and over production till yesterday, a sudden cry by industry or trade or commentators of acute shortages or calamitous forebodings will not be the right approach. The consumer demand, particularly in a consumer item like cloth, is not altogether too elastic to warrant very wide fluctuations and neither is the capacity of the Indian cotton textile industry so restricted or static as not to be able to produce 500 to 1,000 million yards, if internal or external demand so increases. If all work in harmony and with the fullest awareness, and I include full awareness on the part of the Government which, if I may say so, is already there, I think there should be no cause of undue anxiety. All of us have to avoid creating a wrong psychology, while remaining fully alert and avoiding complacency. The supplies of cotton have to be made adequate for meeting with the demand and in that direction steps are being continuously taken.

As I have said earlier, exports of cloth during the year 1958 were the lowest during the past 10 years or so. In consultation with the Industry, the scheme is working under which exporters exporting cloth and yarn are enabled to secure certain incentives by way of import entitlements for import of the basic raw materials and machinery required by the textile industry, in order that they may improve quality of the cloth produced and also reduce the cost thereof. Since the scheme has been implemented there has been a perceptible improvement in the quantum of exports. Incentives can at best be only palliatives over short periods. The task of maintaining and improving exports of Indian cotton textiles should essentially be the concern of the Industry although Government should render all possible assistance to the Industry. Under the Second Five-Year Plan the target for export of cloth was set at 1,000 million yards. This will also help the modernisation of the plant and machinery as well as the maintaining and increasing of textile production itself.

Reduction in Cost and Improvement in Quality

Improvement in quality and reduction in cost call for an immediate programme for quickening the pace of rehabilitation and modernisation of the productive equipment in the mill industry. In this regard, the role of technicians is indeed very important. As people well-versed in the knowhow of production they have to, in a concerted manner, advise the management of the mills how quickly and how effectively modernisation and rehabilitation of the productive plant could be carried out. Technicians do, no doubt, act as a link between the management and the workers, but they should also serve as the live wire in the matter of convincingly suggesting methods which would quicken the pace of modernisation of the productive plant. Training of technicians, skilled workers and supervisors is of paramount importance particularly in the context of the proposed rapid industrialisation during the Third Plan period. In this context, I may state that the Hindustan Machine Tool Training Centre offers good facilities for

training of foremen, supervisors and specialised technicians and the centre is turning out such people in fairly good numbers. We are also proposing to have such centres open to both the public and private sectors in the different projects of the Government. Government is also contemplating to bring in legislation to to make it compulsory for different industries to take up some apprentices for training to be specified, taking into account the needs of the country and in general consultations with the Federation and Associations of industries.

Productivity Studies

The importance of productivity studies for advancement of the industry cannot be overemphasized.

It should, therefore, be to the interest of both management and labour if they devote more energy to such studies. I am sure, in the long run, this will be of utmost benefit to management, labour and to the Industry as a whole.

Manufacture of Textile Mills Machinery

Considerable progress has been made in the manufacture, within the country, of many important machinery and components required by the textile industry. Some items of textile machinery like spindles, ring frames, plain looms, carding engines, textile stores, etc., are now being produced in adequate quantities in the country itself. A beginning has also been made towards the manufacture of automatic looms, draw frames, fly-frames and some types of wet processing machinery. Very soon all items of machinery and accessories have got to be manufactured in the country itself. The *ad hoc* Committee on textile Machinery manufacture will be meeting shortly to consider measures and steps to cover the manufacture of most of the items of textile machinery in the country during the Third Five-Year Plan.

Maintenance

An important factor which perhaps has not received as much adequate attention as it deserves, is the need for the proper maintenance of and methodical attendance to machinery. This need is in respect of both existing machinery as also in regard to new machinery added under programmes of renovation and modernization of the worn-out machinery. Systematic inspection and maintenance and continuous replacement of worn-out parts are very important requisites in the proper upkeep of the productive plant in mills. A stitch in time saves nine is not only a proverb or a wise saying but is a profound economic truth which cannot be neglected. In this task the technicians should unhesitatingly render maximum assistance to those in charge of managing the mills.

Dignity and Status of Technicians

At a time when the need is for higher productivity, and the industry itself is set on the road to modernise its productive equipment, any feeling of frustration or apathy on the part of technicians has to be recognised and remedied quickly. I would urge technicians not to give room to a feeling of despondency. The vast vista and the panorama that are opening out before them are bright and promising and by adopting the right and optimistic attitude towards the task and towards life, the technicians and engineers of India will be performing, with a willingness to adopt themselves to the conditions as they emerge, a very useful and yeomen service to the industry and to this "generation of builders" for our great country.

Role of Technicians

I would, in this connection, like to stress an oft-repeated truism that just as an industrialist should not be a hard-boiled financier, the technicians also should not be merely an automaturn. Even under existing conditions and circumtances they should try to learn and utilise their knowledge to the benefit of the industry. Methods of operation are as important for the efficient and economic functioning of any industry as the availability of efficient and intelligent leadership, tools of production, management and labour. Germany's and Japan's success in the industrial field are in no small measure due to their genius in improvising operational methods. Progress lies in extracting the maximum advantage under conditions of handicap. If West Germany and Japan, despite the ravages of of the last World War, have achieved phenomenal progress in trade and industry, it was to a considerable extent due to the drive, adaptability, initiative, resourcefulness, ingenuity and hard work of their engineers and technicians. Knowing as I do the engineers and technicians of my country, I feel that there is nothing to prevent Indian technicians from going forward and contributing their share in the development and prosperity of the Indian Industry in general and Indian textile industry in particular.

* * *

Shri Bharat Ram, an eminent industrialist, offers here many useful suggestions.

TEXTILE TRENDS

LALA BHARAT RAM
Chairman, The Delhi Cloth & General Mills Co. Ltd., Delhi

The cotton mill industry seems to have turned the corner and our textile mills have shared in this general improvement. But even so, the textile situation, as a whole, has some disturbing aspects to which I would like to draw your attention.

Textile Exports

In the first place, I should refer to the export situation, which has been showing this year distinct signs of improvement over the preceding year. On the basis of present trends, exports for the whole year are likely to reach 700 million yards. I am glad about the revival and the industry has cause to be thankful to the Government for the export incentive schemes which have been an active factor in the increase in exports. But perhaps we should not miss sight of the fact that even at 700 million yards, the exports for 1959 will fall short of the average during 1954-57, namely, 805 million yards. This, in turn, is considerably short, as you will recall, of the Second Plan target of 1,000 million yards of export.

As a matter of fact a circumstance has appeared which holds a threat to our export trade. The prices of raw cotton have been rising rapidly, and currently in several varieties they are 20 to 22% more than the prices prevailing this time last year. As a result, not only have Indian cotton mills lost whatever advantage they once had in the shape of cheaper cotton but they have also come to a position where the prices of Indian cotton are completely out of parity with world cotton prices.

The problem of rising cotton prices has an urgency about it also from another angle. The rise in raw material prices is bound to be reflected, sooner or later, in the prices of cloth paid by consumers in India.

In these circumtances, I feel justified in suggesting to the Government of India to license immediately the import of 3 to 4 lakh bales of cotton of the staple length 7/8" to 15/16", over and above the normal quota for import of higher staple cotton. Only then we will have a balance between the supply of and the demand for Indian cotton this season at prices which are fair to mills and to the consumers of cloth.

Machinery

While I am on the subject of the cotton mill industry, I should like to emphasize the great need of the textile industry to equip itself with the latest machinery. This is inevitable if the industry is to meet adequately the challenge of the world markets, and also to give to the Indian consumer cloth at a price which he can afford and which will enable him to increase his standard of consumption.

I am all in favour of the encouragement and development of machinery manufacture in India. But it is necessary to realise that extensive renovation and modernisation do not mean merely having new machines. It is equally necessary to ensure that the machinery supplied is also of the latest kind, if our textile industry is to stand in world competition.

Here is an excellent exposition of the basic requirements of this most vital industry submitted to the Planning Commission.

COTTON TEXTILES IN THE THIRD FIVE YEAR PLAN

The Committee of the Indian Cotton Mills' Federation understand that the Planning Commission have started formulating their ideas about the Third Five-Year Plan and that the Commission would welcome suggestions from all sectors of the economy. The Federation has great pleasure in submitting herewith a memorandum containing views of the Committee of the Federation about targets in the Third Plan for the cotton textile industry.

Basic Assumptions

It will be remembered that the Millowners' Associations of Bombay and Ahmedabad had jointly submitted to the Planning Commission in August, 1955, a memorandum about the role of the cotton textile industry in the Second Five-Year Plan. In that memorandum estimates were made on the basis of the information then available, about the level of per capita income and per capita consumption expenditure that was likely to be attained in the last year of the Second Five-Year Plan. The probable increase in consumption expenditure was split up between foodgrains, cotton textiles and other items, and with the help of estimates of cloth prices, it was estimated that the consumption of cloth by the end of the Plan period would reach the figure of 22 yards per capita.

The brisk upward movement in the per capita consumption which was occurring just before and after the submission of the memorandum in August, 1955 justified the industry's estimates and a year later actually a shortage of cloth supply was apprehended. Instead of considering ways and means of increasing the supply so as to meet the demand, Government decided to increase the excise duties in September 1956 with a view to inhibiting consumption and increasing exports. In the words of the Textile Enquiry Committee (1958): "Before 1956, there war increase in prices, larger offtakes and dwindling stocks, which unmistakably represented an inflationary condition. The somewhat drastic measures

adopted in September 1956 would seem to have set the pattern in the contrary direction. In the opinion of the Committee, neither of these factors is a healthy feature either for the industry or for the country's economy."

Apart from the impact of the sudden increase in excise duties, certain other factors also came into play in the subsequent period. Due to the increase in the cost of living, brought about primarily by an increase in the foodgrain prices, the common man was required to divert his consumption expenditure from cotton textiles to foodgrains and other essentials. At the same time, there was an increase in cotton prices and in dearness allowance, resulting in higher costs of production. Starting with failure on the foodgrains front, there was a setback in the progress of the country's economy and in the rate of increase of real income and these also had their repercussions on the consumption of mill cloth.

Ignoring all these factors, for which the responsibility was not that of the industry, the industry was blamed for its estimate of a per capita consumption of 22 yards. Because of this experience, it is with some hesitation that the industry can once again attempt to formulate ideas about the likely trend of consumption of cotton textiles in the Third Plan. The estimates that are given hereafter, it must, therefore be mentioned, are based on the following presumptions :—

(i) The excise duty and other burdens on the industry are maintained at reasonable levels;

(ii) Cotton and other raw materials are made available at reasonable prices;

(iii) Any changes in the wage structure that may take place hereafter will be based on scientific correlation between wage rates and workloads and finally,

(iv) The economy of the country progresses along the lines of the basic targets of the Plan.

It is only subject to these safeguards that certain estimates are set forth in this note.

Estimate of Per Capita Consumption

The per capita availability of cloth in the recent past has been as under :

1952	...	14.4 yds.
1953	...	15.2 ,,
1954	...	15.2 ,,
1955	...	16.1 ,,
1956	...	16.6 ,,
1957	...	16.5 ,,
1958	...	16.7 ,,

The Textile Enquiry Committee (Joshi Committee), which submitted its report in July 1958, stated : "Since the economic development is not at the rate envisaged in the Second Five-Year Plan, we do not anticipate that the per capita consumption will exceed 17.5 yds." The per capita consumption having reached the figure of 16.7 yds. in 1958 the increase in the next three years has thus been pitched by the Enquiry Committee at less that 0.8 yards, and it may, therefore, be assumed that the per capita consumption would actually reach, if not exceed, the figure of 17.5 yds. by 1961.

We may now proceed to estimate the per capita consumption of cloth that is likely to be reached in 1966 if the various Plan targets are fulfilled. The following table attempts to estimate the probable consumption expenditure at 1952-53 prices:—

	In 1961, i.e., end of Second Plan	In 1966, i.e.. end of Third Plan
National income at 1952-53 prices	Rs. 13480 crores	Rs 17260 crores.
Rate of investment as percentage of national income	10.7	13.7

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	1961	1966
Hence, consumption expenditure in the last year of the Plan	Rs. 12038	Rs. 14895
Population at the end of Plan	408 mil.	434 mil.
Consumption expenditure per capita	Rs. 295	Rs. 343
		(An increase of 16%)

It will be seen that, at constant prices, the consumption expenditure per capita is estimated to go up from Rs. 295 in 1961 to Rs. 343 in 1966, which is an increase of 16 per cent.

If the increase in the consumption of cloth is just equal to the increase in consumption expenditure, i.e., 16 per cent, the per capita consumption of cloth will go up from 17.5 yards in 1961 to **20.3 yards in 1966.** In technical parlance, the elasticity of demand for cloth, we postulate, will be unity.

In 1966, for a population of 434 millions, the requirement for domestic consumption will, at 20.3 yards per capita, amount to 8810 million yards. Putting estimated exports at 800 million yards, the total requirement by the end of the Third Plan will be around **9600 million yards.**

Targets for Ambar and Powerloom Sectors

The revised targets of production in 1961 for various sectors are as under:

Mills	5100 to 5200 million yards
Handloom	2100 million yards
Ambar Cloth	300 ,, ,,
Powerlooms	400 ,, ,,
Total:	7900 to 8000 million yards.

The additional production required by the end of the Third Plan is thus of the order of 1600 to 1700 million yards, and the next question for consideration is how it should be divided among the various sectors of the industry.

The Ambar scheme has not been able to make progress on the scale originally envisaged, and it is doubtful if the production of Ambar cloth will reach even the Second Plan target of 300 million yards. It is also doubtful how far the Ambar scheme is fulfilling its main purpose, namely, that of providing a worthwhile secondary occupation to the village folk. It might, therefore, be assumed that the scope of Ambar cloth might not be expanded in the Third Plan beyond what has been allotted to it in the Second Plan.

The additional production of 1600 million yards required by the end of the Third Five-Year Plan, we suggest, should be allocated between the mill sector and the handloom and powerloom sectors, in the proportion of their targets for the Second Plan period. The mill sector with the target of 5200 million yards for 1961 will thus be required to produce 6300 million yards by the end of the Third Plan, and the handloom and powerloom sectors with a target of 2500 million yards for 1961, will be required to produce 3300 million yards by 1966. We have, in the following paragraphs, analysed from various angles the production that might be allocated to the various sectors and it transpires that the targets arrived at through this analysis coincide with the figures that have just been suggested.

The production on powerlooms has expanded progressively from 278 million yards in 1956 to 303 million yards in 1957 and 331 million yards in 1958. The powerloom sector, which has been allotted a target of 400 million yards by the end of the Second Plan, bids fair to reach and even exceed this target, and if the special privileges now available to the small powerloom units are continued as at present, we should not be surprised if their production reaches even 500 million

yards by 1961. However, there seems to be a realisation all round that the small powerloom sector is getting away with the best of both the worlds. While on the one hand, it pays little or no taxes and is not hampered by any labour legislation, on the other it can produce all the varieties reserved for the handloom sector. We shall, therefore, assume that the production on powerlooms will not be allowed to exceed 500 million yards in the Third Plan, although with proper vigilance it might and should be possible to restrain production in the small powerloom units to even smaller proportions. This means that the powerloom sector whose target for the Second Plan is 400 million yards, may be given another 100 million yards for the Third Plan.

Targets for Handloom and Mill Sectors

Out of the extra 1600 to 1700 million yards to be produced in the Third Plan, we are left with 1500 to 1600 million yards for being distributed between the mill sector and the handloom sector. It is not for the industry to determine how this extra production should be divided between the two sectors, and all that we can do is to consider the various possiblities as well as the advantages and disadvantages which will flow from allotting this production to one or the other sector.

The very first thing which has to be considered in this connection is the policy which is likely to be adopted towards an expansion of the handloom sector. In this connection, it would be useful to turn to the Karve Committee's report published in October, 1955. In paragraph 32 of the Report, the Karve Committee administers a warning that measures taken during the Second Five-Year Plan should not put handicaps in the way of progress or planning in the future five year periods. The Committee then goes on to say:

"The importance and relevance of this consideration may be illustrated as follows: The objective of providing additional employment may be achieved by creating special opportunities of work for large numbers of people in productive activity carried on in ways which may yield only a very small amount of net income to them. Programmes of creation of such work would then have to be supported by direct or indirect subsidies to yield a minimum level of subsistence income. In effect, this would involve relief of the unemployed through public funds with only a very small contribution being received from the fruit of their employment. Further, if this involves either bringing in new persons who are not engaged traditionally in those occupations or creating new equipments for the purpose, it would result in the employment of labour in directions where its use is patently uneconomic. In a programme of future development, this would prove a handicap as, presumably, these resources and personnel will soon have to be withdrawn from these uses. The same reasoning applies to the extent and duration of the protection given to existing employment in means of production which have become completely obsolete or relatively very uneconomic."

This paragraph applies fully to the handloom industry. The earning of a handloom weaver being almost on the starvation level, the employment provided by handlooms may aptly be described as one which "yields only a very small amount of net income". Handloom cloth is free from excise and additional excise duties, which amounts to an indirect subsidy, and there are direct subsidies as well. Applying, therefore, the criteria of the above paragraph of the Karve Committee's report, future progress or planning of the country would be handicapped if persons who are so far not traditionally engaged in handloom weaving are allowed to enter this fold. In other words, while the existing handloom weavers should be provided with gainful employment, care would have to be taken to see that there is no fresh accretion to the ranks of handloom weavers.

If this conclusion arrived at from the recommendations of the Karve Committee's report is made the basis of Governmental policy towards handlooms, the target of production for the handloom sector will have

to be set in such a manner that it can be achieved only with the existing handlooms and existing handloom weavers without calling for the creation of new potential. We shall, therefore, estimate how much cloth can be produced on the existing handloom equipment.

According to the Karve Committee, a daily production of 6 yards per loom may be expected after various technical improvements are made in the existing handlooms. The Committee also suggest that employment should be provided for 300 days in a year, which means an annual production of 1800 yards per handloom. There is a wide difference of opinion about the number of active handlooms. The Kanungo Committee put this figure at 12 lakhs and Karve Committee at 20 lakhs. If it is the former, the maximum possible production from handlooms will be 2160 million yards, and if the latter, 3600 million yards, on the assumption that technical improvement is brought about in respect of every single handloom and that all looms work for 300 days in a year. The Chairman of the Handloom Board recently gave his estimate of the number of handlooms as 25 lakhs. Be that as it may, the production of handlooms in 1958 amounted to 1[illegible]00 million yards, and the point for consideration is what should reasonably be considered the production potential of handlooms in order to give to handloom weavers full-time employment on existing handlooms. We would regard 2500 million yards as a realistic estimate of what the handlooms can be expected to produce. As the revised target of production for handlooms for 1961 is 2100 million yards, the additional quantum to be allotted to them for the Third Plan would amount to 400 million yards. The balance of 1100 to 1200 million yards of additional production for the Third Plan should be allotted to the mill sector.

Apart from the sound economic argument advanced by the Karve Committee for not allowing expansion of an occupation which requires subsidies to yield even subsistence incomes, there are other good reasons why it would be beneficial to the economy to allot more production to the mill sector than to the handloom sector. The mill cloth, we may assume, will continue to yield to the Central exchequer revenue of round about 20 nP per yard in the shape of excise duty, additional excise duty, income-tax, etc. On this basis, for every 100 million yards allotted to the mill sector, the Central exchequer will derive a benefit of Rs. 2 crores. Over and above that, the consumer will also get his cloth cheaper, which means an advantage to the common man in terms of real income. If the mill sector is allotted 1200 million yards, it means a benefit of about Rs. 24 crores to the Central exchequer and this will more than compensate whatever doubtful advantages that may be supposed to be available to the economy due to the potential of the handloom industry to provide employment.

Cotton

In order to produce a total quantity of 9600 million yards and provide the usual extra factory demand, the requirement of cotton will be around 72 lakh bales. If imports of cotton are to continue at the present level of around 6 lakh bales, the target for production of Indian cotton will have to be fixed around 66 lakh bales.

Total production of

cloth	9600 million yards.

To be produced as under :

Mill Sector	6300 million yards.
Non-mill Sector	3300 million yards.

(The indicated division of this being 2500 million yards for handloom sector, 500 million yards for powerloom sector and 300 million yards for Ambar cloth)

Requirement of cotton : 63 lakh bales.

To give fillip to Export Promotion, A.I.M.O., A.I.E.C. and I.C F.T. organised a Seminar at Bombay last October. Its resolutions are given below.

COTTON TEXTILES

This Seminar views with some degree of satisfaction the recent trend in the exports of cotton textiles which have been stimulated to a large extent by the various export promotion incentives and is of the opinion that in order to maintain continuity of this favourable trend, it is necessary that the export incentives should continue and an announcement to the effect that the same will be effective till at least the end of June 1960, should be made to enable the industry and trade to take appropriate measures to cater to the potential export markets.

This Seminar recommends:

(i) that the mills who have not exported in the past should be exhorted to export a minimum of 10% of their production as a start;

(ii) that the recommendations made by the Cotton Textiles Export Promotion Council, for the promotiom of exports of finished piecegoods, should be implemented by the Government immediately;

(iii) that a Conference of Millowners, Exporters and the Cotton Textile Export Promotion Council be called soon to devise further ways and means of promoting exports of finished piecegoods;

(iv) that for the purpose of modernisation and rationalisation, the basis of the entitlements for the machinery should be revised and the import entitlements be substantially increased;

(v) that in consultation with the Cotton Mills' Federation, an adequate percentage of the production for export of every mill should be compulsorily inspected before export;

(vi) that in view of the high cost of production in India, the low price realisation in the overseas markets and the large tax content in the final production cost, a high powered committee should be formed to evolve a formula by which a percentage of the tax content should be rebated to the industry on their exports;

(vii) that intensive market research should be carried out in all traditional and non-traditional market for the purpose of promoting exports in the immediate future and for this purpose necessary funds should be made available by the Government;

(viii) that as the main problem of promoting exports in the long run, hinges on modernisation and rationalisation of the industry and the supply of goods at competitive prices, any

section of labour becoming surplus a result of this technological unemployment should be retrenched on payment of gratuity and other retirement benefits if alternative employments offered are not accepted;

(ix) that the Government should form a special committee for the simplification of procedure relating to customs and other ancillary export services and the recommendations made by this committee should be implemented without any delay;

(x) that concessional railway freight rates for the export of cotton textiles from inland centres to port towns should be granted immediately, on the same lines as have been granted to other commodities;

(xi) that the mills should be compelled to adhere to delivery contracts and for this purpose a penalty clause should be incorporated in the present Standard Contract Form for delays in deliveries;

(xii) that in view of the growing international demand for fabrics made of mixed fibres, the Control Orders of the Government should be suitably amended so as to allow manufacture of piecegoods made of mixed fibres, in the Cotton Mills and Rayon Factories;

(xiii) that the Incentive Scheme recommended by the Cotton Textiles Export Promotion Council to the Government for Readymade Garments and Hosiery Goods, should be implemented without further delay;

(xiv) that the Sales Tax levied by various State Governments on the sale of cotton yarn for export, should be abolished;

(xv) that in view of the declining exports of Cotton Waste, the present export duty of 15% on cotton waste should be abolished immediately; and

(xvi) that the Trade Organisations of Indian Consular Services and Trade Commissioners abroad, should be made more effective so as to be of assistance in our export promotion drive.

Art Silk Textiles

While in the opinion of this Seminar it is not possible in the near future for the exports of Rayon Fabrics to reach the high level they attained in the past it is of the view that the genuine export trade in rayon textiles can be developed to a great extent by taking appropriate measures which will of course involve burdening the domestic market for the purpose of promoting exports. Any institution which may be created for the purpose of promoting the policy and directing this incentive scheme, should, in the opinion of this Seminar, comprise of all the important sectors of trade and industry, so that the experience and knowledge of the exporters in respect of the sales of goods and of the market requirements may be combined with the talent of the manufacturing units to produce suitable qualities.

While the Seminar believes that the present export promotion scheme in existence is sound in principle as it affords sufficient incentive in the form of import licences for Art Silk Yarn and it also prevents substandard qualities of fabrics to be exported by preinspection, it is of the opinion that there is some room for adjustments of administrative machinery for expediting the inspection and recommends fixing of the entitlement prices in new qualities and that inspection of goods offered for export should be finalised within a maximum of 3-4 days, and that further compensation and incentive should be provided by way of retention of about 25% of the earned foreign exchange for the import of permissible items, as the Government may allow, as this will pave the way for subsiding the differences between the internal and international prices because the natural laws of demand and supply will apply and prices of many commodities will be stabilised whereas a levy on art silk yarn imports will result in continuous widening of the gap between internal and international prices and therefore any scheme based on levies will be self-defeating.

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Ahmedabad Cotton Mills are celebrated for their enterprise and skill. Their basic problems are frankly discussed here.

COTTON TEXTILE INDUSTRY IN AHMEDABAD

The cotton textile industry ranks by virtue of its stature and significance highest among the organised industries in India. Unlike the jute industry, the Indian cotton textile industry owes its growth to not merely Indian capital but also to Indian management. Naturally, at a time when the Indian industrial climate was most uncongenial for a healthy growth, the cotton textile industry under Indian management required the best managerial skill, operational integrity and undaunted spirit. In the teeth of opposition from the vested interests of Great Britain (Lancashire), the Indian cotton textile organisations had to give their very best. It is really very good for us that these organisers did not yield to the rather step-motherly treatment from either the British Government in India or the British trade interests and the competitors outside. Ahmedabad in Gujrat easily occupies the pride of place in wading through the storms and trials of the situations. It is in Ahmedabad that the Indian cotton textile industry has built up its most important centre. It is for these reasons that we propose to deal with the process of development that the Ahmedabad Mills followed from the beginning to the present time.

Early Development

Though the first cotton mill in India was started near Calcutta in 1818, it was in 1854 with the establishment of the Bombay Spinning and Weaving Mill that a real start was made; for the Bombay Spinning and Weaving Mill saw the tremendous upsurge in this context. The growth of Indian cotton textile industry bespeaks a patient creative spirit that made the way for slow but very sure progress. We can gauge the rate of development from the facts that while in 1876 there were 47 mills with a spindleage of 11,00,112 and loomage of 9139, those in 1905 were 197; 51,63,486; and

50,139 respectively. The figures under the same heads for 1929 (year ending August 31) were 344; 88,07,064, and 1,74,992 respectively. Of this progress during the period in question, the share of Ahmedabad was quite substantial. These periods, in fact indicate a galloping rate of gathering dimensions of the Indian cotton textile industry.

Certain Landmarks

The cotton textile industry of India, like all other industries, has wended its way through different stages of fluctuating fortunes arising from a variety of factors like the initial unfavourable climate, the pressure of the First War, the financial crisis of the thirties, the Second World War, the partition of the country and foreign competition along with the rather overworked plant and machinery in the post-Second-War years. These factors somehow or other had a way in fashioning the destiny of the industry in India and influenced their present shape in so far as those who were weak and inefficient had to quit the realm. No special mention of the Ahmedabad Mills is necessary as they also suffered with the others. But the fact needs be mentioned that the clustering of a number of mills in a compact area gave Ahmedadad the strength of unity. As a geographical entity Ahmedabad, like the places of the Bombay Presidency, had the advantage of the Black Cotton Soil of the Deccan plateau as the producing area of quality cotton. The markets for Ahmedabad Mills also gradually became quite extensive in that they not only covered their contiguous areas but also had their goods placed in markets throughout India.

The Modern Era

The modern era for the cotton mills at Ahmedabad may be, as in tne case of others, said to have started with institution of the Five-Year Plans. This is an era marked by increased responsibilities in the background of the broader national viewpoint as a whole and it is quite interesting to follow the movements of the mills at Ahmedabad from 1951-52 to 1957-58 and look up their discharge of the responsibilities in all phases. The figures below will indicate the progress or otherwise of the cotton mills at Ahmedabad.*

In the table:—

A—Total number of spindles installed

B—Average number of spindles at work daily.

C—Number of Looms installed.

D—Average number of Looms at work daily.

E—Approximate quantity of cotton consumed during each year in candies of 784 lbs.

F—Average number of hands employed daily.

While the period from 1951-52 to 1954-55 shows a steady growth under all the heads in relation to the starting year 1951-52, a crisis came in the industry in 1956-57 casting a spell of bad luck in very many ways. The replacement grogrammes of textile machinery could not be put through due to many physical restrictions like foreign exchange availability, excise duty, etc., and some indirect restrictions

		A	B	C	D	E	F
1951—52	..	19,80,032	18,23,231	42,165	39,241	5,65,554	71,632
1952—53	..	20,23,552	18,82,146	42,371	40,212	3,18,030	73,235
1953—54	..	20,55,710	18,61,830	42,578	39,500	3,16,730	71,838
1954—55	..	20,67,200	19,03,898	42,607	40,543	3,22,519	73,080
1955—56	..	20,36,408		41,642			
1956—57	..	20,39,162	19,07,015	41,550	40,105	3,46,183	71,904
1957—58	..	20,56,174	19,18,242	41,580	40,239	3,55,666	1,30,658

* The number of mills were : 74,74,74,74,71,71, (seriatim, excepting 1955—56)
(Source : 'The Indian Cotton Textile Industry Annual").

like marketing difficulties of the finished textiles at the price chargeable and the fall in demand. A major portion of the people's purse being spent on buying dear food, the fall in demand was inevitable. So the losses of the cotton mills were mounting up and closure of mills was reported from various places including ten Ahmadabad mills. The sales recorded a continued fall, the foreign markets laid bare our limitations in the financial operation of the industry. Though belatedly, the Government, in appraising the critical situation facing the industry reduced the duty and permitted, of couse, with restrictions, to install automatic looms in some mills to tide over the problem. The problems and the future of the industry as they are reflected in a region can bespeak an attitude growing in the management of the cotton mills. Recently, the Calico group of mills at Ahmedabad tried the utilization of the modern methods of organisation of industries for the greater utilization of resources. The experience of the mills has been recorded by Dr A.K. Rice in his book, "Productivity and Social Organization. The Ahmedabad Experiment."*Dr. Rice was the expert guide in the experiment and the experiment itself was a thorough success and is worthy of emulation in other centres. Ahmedabad also had the benefit of the advice from the I.L.O. productivity experts who came to this country on a technical assistance mission.

Production

Total cloth produced by the Ahmedabad mills during the three years, 1955, 1956, 1957 may be seen from the following figures in the background of the total Indian production of cloth during these years.

AHMEDABAD INDIA (*including Ahmedabad*)

(Figures in thousands)

	LBS.	YDS.	LBS.	YDS.
1956	2,12,564	12,11,807	12,00,104	53,06,584
1957	2,17,326	11,96,460	12,44,77	53,17,419
(+) or (—)	4,762	—15,347		

Source: 'Indian Textile Industry,' Statistical Bulletin. Annual—1957) The figures under Ahmedabad reveal a typical post-war situation. While total production of cloth has decreased by 15,347,000 yds., it has recorded an increase in weight to the extent of 4,762,000 lbs. This shows a marked emphasis on coarse and medium quality cloth to fit in with the modern conditions of falling demand of quality cloth.

The Future Prospects

Much of future of the cloth mills at Ahmedabad depends on, in line with the cotton textile industry in general, how the Government looks upon them in pursuance of their export-import policies, exploration of new markets, imposition of duties on consumption and export of cotton textiles and such other factors that are weighing them down heavily under the top-notching problems of economic planning in India. The best future that can be contemplated for the mills at Ahmedabad is one in which they endeavour to reduce prices for reaching the poor in the countryside. It is really a disconcerting phenomenon that while the majority of Indian population live barely in their loin-cloths with an overall Indian average consumption of 16.5 yards per capita the godowns of the mills should be dumped with finished cloths owing to falling sales. In this connection one suggestion appears worthwhile. If the mills working below their installed capacity utilise the idle capacity and produce cloth of coarse quality to be sold to the village people at a rate computed from the charging of the variable expenses needed for this extra production, the village people may feel relieved to a great extent and consumption of cloth will surely rise. The suggestion is not impracticable. In fact, during the last war, "standard cloth" with red borders used to be supplied at a controlled rate. The pricing method in such a case would be based on what is known as marginal costing. In the past the Ahmedabad cotton mills had been noted for their spirit of enterprise. In the future also, it is expected that they will not show any lack of such enterprise when the call comes.

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Our Sports goods are in great demand in over 38 foreign countries. This fine article is a good eye-opener.

INDIAN SPORTS GOODS

A display, small but attractive and one hitting the eye, has been put up by The Sports Goods Export Promotion Council in the World Agriculture Fair. The stall is located in the Octagonal Pavilion which houses the Exportable Products exhibition sponsored by the Ministry of Commerce & Industry to synchronize with the Fair.

Within an area of only 1,250 square feet have been neatly arranged some 300 items ranging from Shuttlecocks to Carrom-boards. It is peculiar to this trade and industry that all types of raw materials-metal, wood, silver etc.—are required for the myriads of manufacturing processes involved. The best possible use has been made of the available space, without either crowding in the articles on display or showing up unnecessary empty spaces.

What is on show

On view are footballs, volleyballs and basketballs alongwith the accessories; hockey sticks, balls and other requisites; and the entire gear for the rocket sames. Cricket occupies an important place: a full ghow-window is devoted.

The Stall may be roughly divided into three sections. The first, consisting of three side display panels, a glass show-case and four show-windows, strike the eye immediately one enters the stall. Here, the various items have been arranged product-wise viz— rackets, soft goods, sports hosiery, indoor games and other equipments On the curved bottoms of these are elegantly displayed photographs concerning the Council's activities and the Indian Sports Goods Industry.

Photos tell the story

The top strip in red, running all along these side display panels over a distance of nearly 50 feet, proudly flashes action photographs of Indian spots men and women. It is a representative selection—offering some thing for every taste and for the enthusiast of every game. You have for instance, India's promise for Rome—Milkha Singh—just leaving the blocks. The two photos showing polo vault and volleyball events depict perfect action. And, each photograph has an appropriate cut-head on top with a detailed caption underneath.

The middle glass case contains all the items of sports were like jerseys, stockings, anklets, knee caps, wristlets, elbow caps and the rest. These brightly coloured articles are surely those as who would not be tempted to buy.

Of the adjoining show-windows, the first contains cricket materials; the second tennis, badminton and squash; the third football, volleyball, basketball, punching ball and rugby; while the fourth gives a true picture of the Industry's production potentialities in equipment for hockey - our National game - the game in which India has held an unbeaten record in the Olympic Games for more than 30 years.

Also displayed in this section is a giant tennis racket - with everything giant about it - gigantic and extraordinary.

Bamboos are pressed into service. The second section has an unorthodox setting. Against a black canvas background, a number of bamboo uprights are fitted into the ceiling. Bamboo shelves are plugged into the uprights, on which are played up varied types of equipments e.g. baseball, cricket, hockey, football, ice-hockey, and prize cups and trophies. Mercury lights floodlight the background, imparting it a distinctness all its own.

In the centre of the stall on a near-circular base is a hanging display. From a volleyball net, tied round the pillar having carrom boards on its flanks, are suspended leather, rubber and hosiery items. The black net, the whiteness of the pillar and the red cloth strip on the ceiling, all lend colour to the interior show. Even the floor is not left unattended: athletic equipment like throwing hammer, javelin etc. make their most of it. To get a clear picture of the spectacular setting before you, you only need to go inside the glass cabin to watch the feast before your eyes.

Charts details the achievements. Relevant charts are also pasted on the walls. These provide the visitor with a clear idea of the home production figures as a whole and item-wise, the centres of production etc. The export potential, the targets fixed and the achievements made during the year are also well depicted.

Against the target of Rs. 55 lakhs, a total of Rs. 40 lakhs exports of Sports Goods were effected in the first three quarters of the year 1959 viz-. Jan-Mar., Apr—Jun., and Jul—Sep. In the light of the achievements of these nine months, the target is most likely to be attained before the year is out. Incidentally, the total exports for 1958 were only to the tune of Rs. 27 lakhs.

Indian Sports Goods enjoy a patronage in as many as 38 countries. With greater emphasis on publicity and propaganda, and personal contacts, it is well nigh possible to expand the market further and bring other countries into the orbit of our exporting influence.

The total number of exporters registered with the Council at present is 120. In principle, only such exporters have been registered as are fully equipped and have the requisite experience for handling export enquiries efficiently.

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Due to intensive research, Madras State is gaining self-sufficiency in Raw Cotton. Here is an illuminating article.

NEW MADRAS COTTONS

L. NEELAKANTAN
Cotton Specialist, Coimbatore

The last 50 years are of great significance in the history of cotton research in Madras. As a result of continuous breeding and testing, better strains are now available which not only yield more but also produce better quality cotton.

Barring the Nilgiris and Kanya Kumari, all the other ten districts of Madras grow cotton, the most important cotton areas being Coimbatore in the central districts and Thirunelveli in the southern districts. The total area under cotton is about ten lakh acres, of which more than 60 per cent is under *desi* varieties.

Two varieties of cotton are commonly grown in Madras. One is an indigenous variety belonging to the species *arboreum* amd goes by the name Karunganni. The other is an American variety introduced from Indo-China in the first decade of this century. It belongs to the species *hirsutum* and is locally known as Cambodia Uganda (CU).

Before the breeding programme was initiated, Karunganni produce 80 pounds of lint per acre. The staple was about a little more than half an inch and the cotton rarely spun more than 25's. Today Karunganni yields 100 pounds of lint per acre, with a staple of a little more than an inch and capable of spinning 30's to 35's. Cambodia in those days yielded 200 pounds of lint per acre with a staple of about three-fourths of an inch and spinning 30's; today it yields 300 pounds under irrigation, with a staple of about 1 1/16 inch and spins over 40's. This upward trend in yield and quality has been rendered possible by the release of newer and better strains of these varieties. Work on improving the yield and quality of Cambodia and Karunganni was intensified from 1920 at the Cotton Breeding Station, Coimbatore, and at the Agricultural Research Station, Koilpatti, respectively.

Ten Strains Distributed

About ten strains have been distributed for general cultivation since then. Among the five Karunganni strains, Karunganni-2 and Karunganni-5 are now under extensive cultivation and have covered about 80 per cent of the total area of six lakh acres under *desi* varieties. Multiplication and distribution at seed of these cottons are being attended to under special schemes functioning at Koilpatti for K-2 and Thiruppur for K-5, respectively.

The latest and the best in yield and quality among the Karunganni strains is Karunganni-6 (Pandyan), evolved at Koilpatti in 1954. It yields 20 pounds of lint per acre and is capable of spinning 35's. It has a greater adaptability range than Karunganni-2 and Karunganni-5 and is intended to replace both. Arrangements are under way to multiply the seed of this strain.

Among the five Cambodian strains, two superior quality cottons, Madras Cambodia Uganda-1 and Madras Cambodia Uganda-2, are already under extensive cultivation. Because of their quality, they have been exempted from price control. A special scheme functioning at Rajapalayam ensures that the quality standards of these cottons delivered to traders are maintained by issuing appropriate certificates based on inspection of the crop at all stages. Seed multiplication schemes for Madras Cambodia Uganda-1 and Madras Cambodia Uganda-2 are functioning at Thiruppur. Distribution of seeds of the latter is done largely by the Uganda Cotton Growers' Marketing Society Ltd., Srivilliputtur, on a co-operative basis.

A new strain, 9030-G, evolved at Coimbatore and intended to replace Madras Cambodia Uganda-1 is awaiting release. It has long staple and is finer than the latter. It yields 380 pounds of lint per acre and is capable of spinning 50's. It was evolved in 1958 and is intended to cover four lakh acres. Greater tolerance to jassid and stem-weevil and ability to defoliate at a later stage than Madras Cambodia Uganda-1 are some of the characteristics of 9030-G.

Strains from outside

Among recent successful introductions of extra-State origin are **P.** 216-F (the short duration Punjab American) for the rice fallows in Tanjore; Moco (Perennial cotton from Brazil) for homestesd cultivation, primarily for handspinning needs; and Andrews—a variety of the world-famous group of Sea Island Cottons.

Further research to evolve longer, finer and stronger-linted strains in *arboreum* and strains resistant to pests, diseases and drought in American cottons has been intensified in recent years. Attempts are being made to transfer valuable traits of this kind in wild cottons, of which about nine are maintained at the Cotton Breeding Station, Coimbatore, on to cultivated races of Cambodia and Karunganni. *Anomalum*, one of the wild types noted for strength and fineness is already exhibiting its good qualities in a number of advanced generation derivatives of hybrids between *arboreum* strains and *Anomalum*. It is hoped to develop new strains of *arboreum* with still finer and stronger lint, retaining all the good agronomic features of its agronomic base already fixed by several generations of cultivation.

Cotton production in Madras State in the beginning of the First Five Year Plan was round about two lakh bales. At the close of the Plan it rose to about three lakh bales. The target for the Second Five Year Plan has been fixed at 4.5 lakh bales. The production for 1957-58 was 3.8 lakh bales. While most of the production in the pre-Plan period was of medium staple cotton, about two-thirds of the production now is of the long staple category. The total requirement of all grades of raw cotton for the State has been estimated at eight lakh bales. With an intensification in the efforts to replace all the present cottons by the new variety and the adoption of more remunerative cultivation practices, Madras can hope to acquire self-sufficiency in raw cotton for the textile and khadi industries in the next ten to 15 years.

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Some of the achievements sketched here will greatly benefit our textile manufacturers.

IN THE USSR TEXTILE INDUSTRY

N. ZAKHAROV

Automatic Spinning Frames

The Spinning Laboratory of the USSR Central Wool Research Institute has designed a unique spinning and twiner frame which combines operations of spinning, slubbing, twisting and rewinding. It can produce bobbins with twisted yarn weighing up to 1.2 kilograms. These machines will increase productivity, reduce the floor area needed by the factories for their installation.

The institute has also developed a new drawing frame which automatically controls the weighing of the ribbon. This machine together with new roving frame equipment and a spinning frame for twisted rove forms a worsted spinning unit that provides a two-fold decrease in transitions when processing the semi-product in the roving frame department.

One of the textile factories has been testing a new cutting and stapling frame designed in the laboratory of the institute. One operation in this machine is sufficient to convert an artificial fibre plait into an endless ribbon, whereas with machines now used the same operation demands several transitions from one machine to another.

Laboratory groups are working on several other important problems. One of these being carried out in co-operation with specialists of a wool factory is the use of artificial fibre such as luvsun, nitrone, caprone and viscose in the wool manufacturing industry. Later on, the spinning laboratory plans to develop an automatic spinning factory for wool and worsted manufacture.

New Machines of the Presnensky Works

Many are the high-productivity models of machines and units that have been created for the textile industry by designers and engineers of the Presnensky Machine-building Works in Moscow.

A design group headed by designer Gzhelskaya has completed the design of a new needle friezing machine which will perform teaseling of cotton fabric. Compared with the machines produced before, this new machine is lighter, has an improved teasle shaft drive

and increased friezing speed. The works have successfully completed production of machines for one and two-sided shearing and hank brushing machine for handling silk fabric and automatic production lines for the mechanization of labour-consuming operations in worsted manufacture, starting with the preparation of the mixture and ending with the silk being delivered into the carding machines. Each production line will comprise seven different types of machines and provide double productivity, reduction of first cost and improvement in quality of the product.

An "Eternal" Spindle

The Kolomna Textile Machinery Works have developed an unusual type of spindle.

This new spindle from the outside is not so pleasing to the eye as the conventional type. What is there peculiar about it ?

Conventional spindles rotate in roller bearings and a sliding support and are fitted with a rather complex damping system. The new type of spindle turns in two ball bearings, fixed inside rubber cushioned racers. This is what can be called a really simple and reliable design.

The new spindle is easy to manufacture and cheap to maintain, its main advantage being its indestructability, with no wearing parts except the bearings, which are easily replaced.

The first of these experimental spindles has successfully passed tests.

Automatic Electro-Engraving Machine

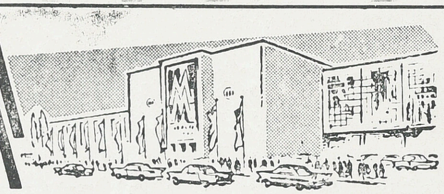
The process of engraving printing rollers for the production of coloured textile cloth is both a difficult and labour-consuming process, taking from a few days to several weeks.

To accelerate this process, the USSR Cotton Fabric Central Research Institute has designed an experimental model of an automatic electro-engraving machine that uses a photo electronic copying device.

The machine is fitted with two rollers. Into one of them the pattern is fixed, the other being for the engraving. Along these two rollers, rotating with the same speed, two devices move, one for "reading" the other for engraving. The former "looks through" the pattern, the latter reproduces it on the copper roller. The entire process occupies only three to four and a half hours, depending on the complexity of the pattern.

The main advantage of this machine is that no finishing process is needed after the engraving.

After preliminary successful tests, several units were further improved so that the machine could provide reliable working in factory conditions. ★



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DYESTUFFS

Within the frame of imposing programme of industrialization that India is realising in all fields, a target of no little importance will be reached by the agreement satisfactorily concluded between the Indian Dyestuff Industries (I.D.I.) and the Italian Aziende Colori Nazionali Affini (A.C.N.A.) for the technical collaboration in the chemical section of the organic colouring matters.

The agreement regards the manufacture by I.D.I. of a wide series, complete in all its colours, of the anthraquinone vat dyes for cotton, which—thanks to their high fastness to light, to wet treatments and to all the agents which have a tendency to deteriorate the dyeings—mark the highest level reached by the synthetic dye industry in the field of cellulose fibres. The installations will be built at Kalyan (Bombay) according to the rules of the most modern technique on drawings and know-hows by A.C.N.A. who shall then assist the complete production cycles. These ones will mainly consist, in a first time, of dyestuffs, but will be progressively extended to the field of the intermediates which represent the basis or the transition stages of the manufacture of the dyes themselves.

When speaking of plants in this particular field, we do not use a general expression, because in the chemical technology of the manufacture of organic colouring matter the working cycle of each dye differs so much from the other ones that up to a certain extent it may be said that the manufacture of each dyestuff requires a particular equipment and therefore an installation by itself.

The same applies to the intermediates through which one must pass during the chemical transformations, which—starting from the simplest basic materials such as

benzene, naphthalene, anthracene—reach, through very numerous stages requiring weeks, the finished materials which deserve the qualification of colouring materials, certain shades.

The profitable and friendly commercial relations existing between the Italian industry of colouring matters—of which ACNA is the most prominent representative—and the Indian market, are not of recent origin; ACNA dyes have been gradually introduced into India ever since 1927, in free competition with the greatest international producers. In the past, it was mostly a question of azo—dyes for wool and of substantive dyes, of sulphur dyes, basic dyes and indigo. Since then, however, all countries with large textile industries—and India is one of the most important ones—have more and more directed their consumption towards the most valued and fast dyes such as—for cotton—naphthols and the relative bases, and, as is the case now, the anthraquinone and indigoid vat dyes which represent the much appreciated ACNA ranges: Romanthrene and Solindene.

The manufactures which IDI-ACNA will undertake at Kalyan (Bombay) will meet such requirements of a definite up-to-date technique, the more so in that the dyes may be prepared here in their most elaborated forms of "micro" and "ultradispersed" powders, the particles of which measures about one micron. The use of these powders has proved to be more and more advantageous in that it allows the highest working speed in the dyeing process and the best results in the dyeing and printing of the fibre with the lowest consumption of colouring matter. From these dyestuffs derive then direct the soluble "leucoesthers"—Solindoli—highly appreciated for the dyeing and printing of the cellulose fibres of the rayons and of the synthetic fibres. It is therefore a wide working programme which is outlined in the most complex manufacturing section that the chemistry of the dyes knows; a programme for which the collaboration with an experienced and tested industry such as ACNA represents the most useful symbiosis. A dyestuff industry as a matter of fact cannot be established from day to day; it has been the result of one hundred years of researches, of discoveries, of sometimes amazing realizations; it is today—for all the greatest manufacturers—the fruit of decade of studies and experiences on the many problems relating to hundreds of "intermediate products" and on the ones of the dyes deriving from them. In this context ACNA (which since 1931 belongs to one of the greatest world chemical companies: the "Montecatini") appears as a reliable collaborator for attaining the highest qualities at the most economical costs. ACNA has at its disposal for its manufactures in Italy two large works: one at Cengio (Savona), and one at Cesano Maderno (Milan). In the first one, besides certain classes of dyes such as Naphthols, Fast Bases, Rhodamines etc., are especially manufactured the heavy chemicals and the bulk intermediates, also for the dyes, which however find their application also in other industries. The works of Cesano Maderno elaborate the intermediates manufactured at Cengio, manufacture themselves the most complex among these intermediates and make the dyes of all the chemical classes for each kind of fibres and for each type of application on the same. Besides that, they prepare important products for other industries: rubber accelerators and anti-oxydants chlorvinylic resins, plasticizers, dyeing assistants, pigments for varnishes, etc.

At the works of Cesano are furthemore active an "Institute of Researches" for the Organic Chemistry, and an "Experimental

Dyehouse" for the study of every dyestuff application, which are, in the respective fields, the most important among those existing in Italy. ACNA is then an industry of ancient and proved experience and of a high technical and scientific level, on which one can fully rely, not only for the plants which are now planned, but also for further and desirable developments.

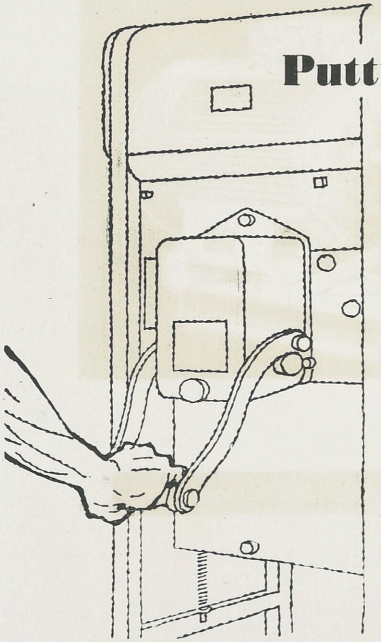
The imminent collaboration, on the technical level between the Indian and the Italian dye industry is not the first one: it has already developed in the field of Naphthols and Fast Bases, with "Amar Dye-Chem Ltd" to which it joins now the one with "Indian Dyestuff Industries".

The textile industry in India, which has one of the most famous traditions and which represents one of the most important activities of a big Country on the way of the most modern developments, will get from the new manufacturers the immediate advantage of having at home, and at the lowest costs, productions of high quality essential for its expansion and for its progress. By this realization the Indian chemical industry, besides the aims already known that the new collaboration wants to attain, will contribute to another very important factor of technical progress, i.e. the training and the specialization of a considerable number of technicians in one of the most difficult sectors of the aromatic chemistry.

The industry of organic colouring matters has been in all countries the matrix of other chemical industries. Chemistry of dyes offers as a matter of fact as a few others the possibility of an experimentation in a field so wide and varied as that of industrial chemistry.

The exaltation of the individual qualifications of the young chemists who will try their strength in this new enterprise is therefore the indirect but the richest in developments to come) harvest of the human capital that is to be employed, and a new, safe promise for the industrial future of India.

It is therefore with the greatest pleasure that we welcome the recent new agreement, auspiciating ever closer ties between the Italian chemical industry and the one which is steadily progressing in the great friendly nation. ★



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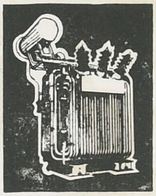

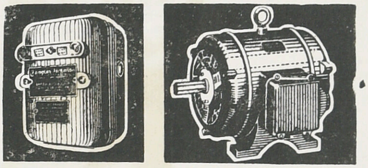

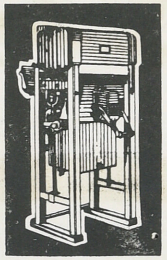

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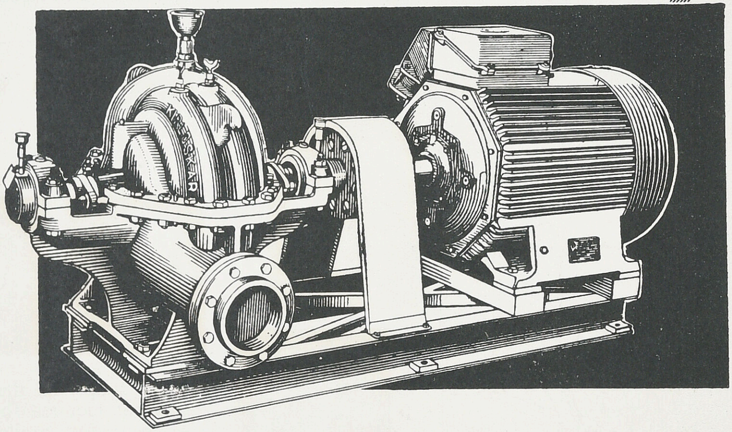

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D. 23

Leipzig Fair is the TAJMAHAL of Germany's industrial glory. Here is a thrilling and enthralling account.

1960 LEIPZIG SPRING TRADE FAIR

The 1960 Leipzig Spring Trade Fair will be held from February 28th to March 8th, 1960, as Technical Fair and Sample Fair for Consumer Goods covering an overall exhibition area of 3,120,000 sq. ft. Already now extensive preparations are being made so as to make the stay in the Fair City of Leipzing of the 9,500 exhibitors from about 50 countries and of the more than 500,000 buyers and visitors from 80 countries expected to attend the Spring Trade Fair as pleasant, well-organised and successful as possible.

Extremely Many-sided Interest Displayed by Foreign Countries

Arrangements made for the 1960 Leipzig Spring Fair, are featured by a specially great interest in floor space which foreshadows a further consolidation in East-West-Trade as a result of the worldwide efforts for a lessening of international tension. Alongside the East European countries, whose exhibition area has been enlarged by 21,500 sq. ft. to some 377.000 sq. ft. as against the previous year, all capitalist states of Europe as well as a great number of oversea countries, among them Burma, India, Iraq, the U.A.R., Argentina, Brazil, Columbia, Cuba, Uruguay and others, will be represented in Leipzig by leading firms and collective displays. The exhibition area occupied by these countries rises by 43,000 sq. ft. to close on 646,000 sq. ft., of which about 410,000 sq. ft. has been booked by West Germany.

Unique Concentration of Products from East and West

The U.S.S.R. will cover a floor space of 129,000 sq. ft. Rumania is again in attendance with a collective show of 43,000 sq. ft. as against the last Spring Fair when it was represented by an information stand only, Poland will enlarge the area of its collective exhibition to 29,000 sq. ft. and requests for larger floor space have also been received from other East European countries. Yugoslavia will be in attendance with a collective exhibition of 8,600 sq. ft.

For the first time Italy will be participating with an official collective display of 4,300 sq. ft. more than at the Spring Fair of 1959. France, always one of the largest foreign exhibitors, will be showing its offer on about 43,000 sq. ft. covered floor space, and shifts the emphasis on the lines of engineering, Demark, too, this year will be concentrating on the display of technical goods to an even greater extent than in the previous year. In addition to the altogether about 20

collective exhibitions, the interest of businessmen from all over the world in particular will be aroused by the exhibitions of Ghana, Burma and Cuba first exhibiting at the Leipzig Fair.

First Participation of Prominent Firms

Vying with the export programme of the East European countries, which demonstrate in an impressive manner the successes of their national economies, is the offer of the industrial countries of Western Europe, which has been enriched in many aspects by firms exhibiting in Leipzig for the first time, and which is characterised in the trade group of iron and steel by a specially strong participation. Besides more than 60 steelworks of West Germany the leading steelworks of Sweden and France will occupy collective stands, whereas the leading West European matallurgical industries will also be represented by Cockerill—Ougree from Belgium, the SIDER export organisation representing the enterprises Ilva and Cornegliano from Italy, the VOEST, Alpine-Montan-Gesellschaft and Schoeller-Bleckmann from Austria, Guest, Keen and Nettlefolds from Great Britain, Norsk Blikkvalseverk from Norway and other individual exhibitors.

Francolor-France, Acna-Italy, ICI-Great Britain, Ciba, Sandoz, Geigy-Switzerland are among the prominent exhibitors in the chemical section. Pye-London, Jeumont-Paris. ACEC-Charleroi and others will be in attendance with products of electrical engineering. Metal-working machines are offered by well-known firms from France, Great Britain, Italy, Luxemburg, Austria, Sweden and Switzerland.

G. D. R. — largest Exhibitor at the 1960 Leipzig Spring Fair

Centrepiece of the comprehensive international engineering display is the high-quality range of the G.D.R. which occupies fourth place among the world's exporters of machinery already now. Supplying complete manufacturing plants, it is one of the leading industrial countries which is demonstrated specifically by the offer at Leipzig Fairs. Also in the Spring of 1960 its offer ranges over all fields of technical production. Special interest is likely to be attracted by the great number of new suggestions made by leading G.D.R. engineering works which contribute to a further machanisation of complete processes in metal working.

The chief exhibitor in the international show of consumer goods, to be displayed on a Fair stand space of 958,000 Sq. ft. and comprising over 800,000 patterns, models, novelties and further developments, are the light industries of the G.D.R. which are scheduled to increse output by 84% and exports by 94%. Pride of place in these groups goes to textiles, glass, ceramics, household utensils, toys and musical instruments.

Travelling to Leipzig

The Official Fair Cards may be obtained on and from January 18, 1960, from the Leipzig Fair Agency in India, Bombay, Delhi, Calcutta and Madras. The Fair visa will be issued free of charge on presentation of the applicant's passport and Official Fair Card at all frontier posts on the borders of the G. D. R.

The Fair City of Leipzig can be reached by favourable connections by either air, rail or road. Direct flights are operated from Amsterdam, Brussels, Budapest, Bucharest, Copenhagen, Prague, Sofia, Vienna, Zurich and other airports, and special flights are operated between Leipzig and Berlin by DEUTSCHE LUFTHANSA. Special Fair trains and carriages provide a wide range of possibilities of travelling to Leipzig. The railways of most European countries give reductions on normal fares amounting to 25-50%. Visitors going by car can reach Leipzig on modern motor roads. ★

Great is the future of this most versatile fibre. The Chairman makes a powerful plea for vaster uses of this magical material.

COIR

T. M. B. NEDUNGADI

Chairman, Coir Board

Coir occupies a very important position in the national economy of India and production of this foreign exchange-earning commodity has a great bearing on employment, particularly in Kerala State. The coconut palm has long been the core of the Southernmost State's industrial structure. For generations Coir Industry has been the 'life-line' of the Malabar Coast and of such quality is the Indian Coir that with Ceylon, which is the only other coir producing country, India has acquired and maintained an unchallenged position in the world markets.

The Coir Industry is basically a Cottage Industry and the extraction of fibre and spinning of yarn are almost entirely done in Cottage and mostly by women. The number of people engaged in this Industry is to the extent of six lakhs. The fact that 50 to 80 per cent of the cost of production is shared by labour is an important feature of the Industry. Apart from the problems of a backward economy in which production is by primitive methods and marketing complicated by the presence of a multiplicity of middlemen and in which co-operative organisation has not become firmly established, the fundamental problem which faces large parts of the Malabar Coast is the human problem. In these parts where about 80 per cent of the coconut husks available in the State are utilised industrially, leaving only a very small margin for further expansion of the industry, the earnings from the Coir Industry naturally dwindle as the population grows from year to year and opportunities for alternative employment are few. It is one of the serious problems which is being tackled by the Coir Board. Now that several co-operatives have been formed, the position of the workers to that extent has improved.

Coir Mats & Matting Industry

The Coir mats and matting industry is one of the well established industries of Kerala State with a history of about a century behind it. Although about 15,000 workers are employed in the manufacture of coir products alone in about 700 factories, it is important to bear in mind that the entire production is by manual labour. No attempt has been made to modernise equipment or production methods with a view to attain higher productivity for fear of displacement of labour.

Exports

The Coir Industry is not only a sustainer of West Coast economy but also a substantial earner of foreign exchange for the country. Coir and coir goods account for about 8 to 10 crores of rupees in India's foreign exchange. It is found that Coir exports of all kinds both in volume and value have expanded considerably between the pre-war and post-war periods. Our foreign markets for coir mats and mattings are the U.K. and other European countries, Canada, U.S.A., Australia and New Zealand. The fortunes of the Industry are very largely dependent on the U.K. market which alone consumes nearly 72% of the output of the manufacturing Industry. But since the last war, many of the European countries have restricted the import of coir floor coverings either because some of them manufacture coir mattings from coir yarn obtained from India or find other substitute material.

Demand

It has been stated very recently by the High Commissioner of India, Ottawa, that there is a potential demand for coir mats in Canada even though coloured coir matting may however require immediate changes for survival.

Again, India's export of coir products to the Middle East countries is stated to have registered an increase of about 65 per cent during the last two years.

Hitherto U.S.S.R. has not been a buyer of our Coir products. Some time back, the U.S.S.R. Trade Representatives visited the Coir Board's Show-room at Delhi and they have sent selected samples of coir products along with quotations to Moscow. It is hoped that Coir might get admittance into U.S.S.R. and countries within her orbit, thus helping to open out new markets for coir products. It is reported that the Indian Exhibition organised by the Indian Embassy in China has evoked keen interest for India's Coir products.

Germany is a big consumer of carpets importing more than Rs. 6 crores worth of carpets and floor-coverings of all varieties. According to the Indian Delegation which recently visited West Germany, notwithstanding the fact that very good carpets were being made in Germany and are also available in the market, Indian Coir Carpets have their own charm due to their luxurious pile, craftsmanship and low price provided thinner varieties in wider range of qualities, designs and colours are exported.

Prospects

Although India is still holding the monopoly for Coir, it is important to bear in mind that coir is only less than 3% of the total world production of hard fibres and even for this, the industry has to depend for its existence mostly on foreign demands. This has its own drawbacks. Any slack in foreign demand or its incapacity to absorb the increased production would undermine the stability of Coir's economy here. A continuously expanding market both at home and abroad is, therefore, essential for Coir's healthy existence.

The development of the market in India for Coir products is of the utmost importance for the industry. Unfortunately, however, the consumption of Indian markets has not exceeded more than 250 tons, as against about 20,000 tons exported. If the uses of Coir floor coverings, especially door mats, are fully appreciated by Indian homes, there is every possibility for India itself absorbing the whole output of the Industry. The Coir Board has already taken on hand a vigorous propaganda drive in India. Apart from taking part in exhibitions and fairs in India and abroad, the Board has also been devoting its attention to more enduring publicity material such as journal, brochure, folders, calendar and catalogue. ★

Our handlooms are in great demand in America. The author in this most illuminating article analyses the vast potentialities of this colourful industry.

SELLING HANDLOOMS ABROAD

PUPUL JAYAKAR

Adviser, Textile Designs, All-India Handloom Board

The export of handloom cloth from India to the non-traditional markets of Europe and the Americas is a complex problem. It involves a drastic change both in production methods in India and in marketing techniques abroad. The recent setting up of the Handloom Export Organisation (H.E.O.) and its decision to operate in the export market through business associates, both exporters and manufacturers, displays a more realistic approach to the export of hand-woven goods.

There is an increasing interest in Indian hand-woven and hand-spun cottons and silks in the United States and a growing awareness amongst Indian manufacturers of the special demands of the American market in terms of quality, design and deliveries. The handloom delegation that recently visited the United States met with considerable response, and it booked orders, on the basis of the special samples they had to offer, to the value of Rs. 1½ crores or over 3 million dollars.

Tremendous potential

It was fairly clear that a tremendous market for our goods exists in the U.S.A. and that we have not yet touched the fringe of the potential demand. To enter and operate on the American textile market, however, demands a detailed comprehension of American marketing techniques and the gearing of production in India to meet the challenge of the special American demands. It is necessary to remember that as yet India is selling handlooms not to any specialised field of marketing, but rather to the general textile trade where handlooms have to compete with the textiles offered from the main textile exporting countries of the world. So far India has been operating in the development of export trade mainly through trade fairs.

Trade fairs

Although trade fairs are of great importance in building up consumer preferences and help greatly in promoting the export of Indian handloom goods, my experience has been that no large textile business is executed through trade fairs. Nor do any of the large textile producing countries like Japan, Italy, Switzerland, France or England offer their textiles through trade fairs. None of the main buyers of textiles visits the general trade fairs.

Most of the textile trade is carried on in great secrecy, and commercial samples are made available only to prospective buyers. While, therefore, taking part in promotional trade fairs, the Handloom Export Organisation will have to seek the existing channels of textile trade to build up a large volume of trade.

The American set-up

The American textile import market operates through the volume importer or converter for the garment trade. Through him the material goes to the department store or retailer. The main market for imported textiles is New York. Los Angeles on the West Coast is also developing as a potential market. In the U.S.A. a very negligible proportion of cloth is sold as yardage goods on the counter. Most of the cloth is converted into garments and then sold in department stores. Price mark-ups are regulated at every stage of the marketing operation and it would, in my opinion, be disastrous to interfere with the main pattern of marketing. To a great extent it is the wholesaler who keeps the market alive. He advertises the goods he has to offer and, at the present moment, he is the main channel of communication between the manufacturer in the U.S.A. and the producer in India.

Appeal of our handlooms

One of the main reasons for the great response to the samples the handloom delegation had to offer was that from the point of design, texture and colours, the goods that were offered were entirely new to the fashion industry in the U.S.A.

This created tremendous buyer interest and it proves that it is the ability of the handloom industry and its designers to continually produce new structures, designs and colour variations on which the volume of export will depend. Fortunately this aspect of the problem has been satisfactorily organised in India. The weavers' Service Centres of the All-India Handloom Board which are working in close collaboration with the H.E.O. is the channel through which design, dye and technical assistance will be made available to the exporting unit of the handloom industry. The designs and finishes produced through these centres have received very encouraging trade reactions.

The handloom delegation sold both to the volume market and the prestige market. The main items were the non-fast or "bleeding" cottons of South India, Malabar bedspreads and yardage cottons, 'tussore' and 'mutka' fabrics, furnishing materials and fine cotton "buta" yardage goods.

'India Madras'

The bulk of the demand was for 'India Madras', the term being used to indicate Madras check-and-stripe patterns in nonfast or 'bleeding' colours. This cloth, which was originally being exported to West Africa, is being used in the U.S.A. for men's shirts, sports jackets, shorts, bathing trunks, and even for coats for formal evening wear. It is also being used for all varieties of women's wear, dresses, skirts, sports wear, beach wear, etc. The demand for this India Madras was so great that the sudden increase in export enquiries has led to exporters entering the market without adequate knowledge of the areas of production. This has caused dangerous repercussions in the production centres of Madras and Andhra.

The price of Madras cloth has risen from 42 cents a yard c.i.f. (cost, insurance and freight) in June—July 1959, to 70-72 cents per yard c.i.f. in October—November 1959. The wages of weavers has also risen from Rs. 1.25

a day, for a sporadic 20 days' work a month, to Rs. 3 a day.

Default in delivery

This rise in prices has resulted in many exporters who had booked orders at lower rates defaulting on deliveries. This situation has been further aggravated by some of the importing houses from the United States sending their representatives to buy ready stocks of Madras goods booked for certain buyers. Thus goods have been sold direct from handloom centres at higher prices to alternative customers. This is likely to have a very serious effect on handloom export to the U.S.A.

There are nearly 40,000 looms in Madras and Andhra that could be geared to the production of these 'bleeding' Madras varieties. It is purely a problem of organisation. I am given to understand that the Handloom Export Organisation has turned to alternative sources in Andhra and Madras to organise production—but a lack of flexibility and speed on the part of weavers' societies to reorganise production is making this organisational work difficult.

The other market

Another problem that has arisen is that because of the increased price levels many of the weavers of this cloth have turned the American market and there is a growing danger of the traditional West African market, which also uses similar goods, being lost. The H.E.O. is trying to get the West African varieties of cloth woven in other centres in Uttar Pradesh, Hyderabad and East Khandesh. This again demands organisation and the adjustment of the resources of the weavers' societies to a change in their pattern of production.

Export Fund

A lack of flexibility in the production processes is one of the gravest weaknesses of the handloom sector. The increase of exports to the non-traditional markets of Europe and America will depend on our capacity to select production centres and gear them to the production of exportable varieties. Unfortunately there is a time-lag between the organisation of these units and the receipt of export orders. Some agency is necessary to hold the goods produced, as the smaller co-operative societies are not capable of holding large stocks. The answer is obviously the establishment of an export development fund to hold goods manufactured against possible export demands. As many of these varieties have an internal market, the problem should be easier of solution, but, unfortunately, here again a lack of co-ordination has made solution difficult.

The handloom Export Organisation is expected to short-circuit many of the difficulties by stocking dyes and chemicals against export enquiries, by setting up central dyeing and finishing plants and by exploring the possibilities of special finishes like 'sanforizing' and anti-creasing of handloom cloth and by setting up quality inspection and control.

The Lessons

With the present experience we have gained of the American market, certain points have emerged with some clarity. If we are to build up large exports to the U.S.A. we shall have to build up contracts with a large number of agencies who would sell our goods to the women's wear, men's wear, home furnishing and other sectors.

One of the main functions of the Handloom Export Organisation will be to gain the confidence of the buyer in the U.S.A. by its performance. In India its task is to encourage as many exporters as possible to offer their goods through the Handloom Export Organisation. This can at best be a longterm project, for which a great deal of patience and careful work will be necessary. But there appears to be no alternative.

At the time of the organisation of the H.E.O. there was some fear expressed in India that the American buyer would be unwilling to do business with a Government-sponsored organisation. This has not proved to be true. The American buyer is only concerned with getting his orders implemented as speedily as possible with guaranteed deliveries and quality controls. The setting up of an organisation which would act as a liaison between the manufacturer in India and the buyer in the U.S.A. and which would undertake the necessary supervision has been generally welcomed.

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* *

Here is a brilliant article that will keep many a textile magnate pensive in his chair. It is daringly original and provocative too.

LOOKING BACK

R. V. NARAYAN

It is a thrilling experience when you analyse the present in relation to the past. The past and its depth is still a matter of guess. For the known past is but a short span when we compare it with the unknown. I think, it was Alfred Lord Tennyson who said that "Knowledge is an Arch where through gleams that untravelled world". So is the knowledge of the past—The untravelled is more, much more than the travelled.

I was particularly attracted to this idea of the past when I viewed the strides of the Textile Industry has made through ages—We can visualise the present, in its magnitude, in its variety and in its indispensability to humanity today, in spite of the cry of a few to shun the product of the industry in giving wild vent to "back to nature" slogan. Perhaps, it is one of the most astounding adventures that industry makes in spinning the yarn. It is not euphemism, I am indulging in when I say "Spinning the Yarn". I mean the real yarn, the industry spins to weave into fabrics of bewitching beauty.

Bewitching indeed is the word for the variety of designs in the woven fabric has been so in more than one respect. Bewitching it is to the eye through its beauty in art and art in beauty translated into the fabric; and bewitching it is to the mind, for it makes you travel into the hoary past when Eve goaded Adam to pluck the forbidden fruit, and they ate them. This episode may be legendary but the legend of cloth today owes very much to the original goading. For, the idea of covering oneself may not have taken birth; but for this goading. Bewitching indeed, it is, to think of the bold copy, designers make of Nature and vie with it in creating designs, Nature has not woven, or man has not yet known or discovered Nature to have woven. When I say Nature has not woven, I am in happy company with Oscar Wilde who built up the theory that "Nature Copies Man."

The modern textile industry as a whole and the products of the industry do help us to look back into the past deeper and deeper. The gadgets developed on the one hand and variety of designs developed on patterns of Nature and natural settings on the other all take us back to the days of old. Itihas, Puranas and other writings of the past disclose that the apparel from coarse bark used in early times have only gradually undergone changes to be the reconstituted cloth as it is today. I am saying reconstituted because, the woven fabric today is very much from the Sylvan source. Take for instance acetate rayon which is catering to the cupidities of silk minded fair sexers who can ill afford the cost of it, nay all those desiring softness and shining. Bamboo or reeds form the principal raw material to be wholly digested and converted into the silken yarn that is smooth like butter and glistens like the glowing lamp. By and large, the main source still remains to be from the woods—the wild woods that yielded the barks and

leaves that went to hide the bodies of the early man. The main difference between then and now is that man did little to dress Nature's fabric and was content to wear them as they were by piecing them together unlike we of today, fell the wood, destroy the woods in fierce acts of vandalism to satisfy our gluttonous greed of fashion turning the same material into the fine fabric to cover the body just in name. Fashion will frown if the apparel does not excel in its fineness, the spider's web. Adam and Eve of history or legend when they hid the portions of their bodies in barks and leaves, they longed to cover them. Adams and Eves of today seem to turn the clock back and tax the producer to create new looms that could weave tissues finer than the spider. Such fabrics help to expose portions of body which the original Adam and Eve sought to cover. Nylon fabrics set at nought and verily outdo the workmanship of the spider.

Modern man has made many a departure from the traditional sources for his material to cover his shame. The Sylvan paradise which yielded him the material to fashion it into the finest fabric is not enough for him. The animal kingdom which shed its warmth giving material to be spun into the silk and woollen yarn, the coccoons, the marinos, the corridales, the Pashminas and the plain wool bearing sheep do not supply him the adequate wealth of material for making the warmth producing wool. This source while still remaining the backbone of wool industry, is very much added to, to increase the bulk in the shape of unions and what not. The glass wool indeed plays today a prominent part. Rayon yields no place to glass wool as a positive source and union wools and other materials increase the bulk of woollen fabric production.

Let us take a turn from the sources and look at the woven fabrics of today. The designs that the art of man has displayed take us back to the days of the early man. More and more designs remind us of the historic pageantry of the olden times, which was no victim to either the Vandalism or the capacity of the modern man. It looks as if it is a positive reminder of the ancient times and our life which our strides in civilisation cannot allow us to regain. The designers, I do not think, ever aimed at making man turn back by this reminder. But he has really helped man to look back and if even only for a winking time, think of the hoary past, when without all the man made gadgets, Nature was capable of and producing and supplying man all his needs, needs similar to the ones he has multiplied for himself today but not so unnecessary and wasteful as it is today.

We do not know yet, whether the speed of Nature's creation is greater than the speed of human destruction. The rate at which we mine minerals, denude vast areas of forest is something appalling. In one sphere, despite the effectiveness of the tools, man with his ingenuity employs in limiting the growth of his own kind, Nature is fast at work to maintain a balance in helping man to provide better living conditions and lengthen the span of life. Though the period of active child bearing is shortened by the higher age of consent and the marriage of women in their twenties as against the teens of history and artificial controls of birth, the number produced during that short span has not diminished. Triplets and quintuplets are not uncommon now and they only herald man too is an animal and an animal first and all else next.

In spite of the the mass production mania and expansionist schemes of man, developing new and newer techniques of production, the spinning wheel of old is by far the stable one. Handy, portable and requiring not only minimum of space but minimum of investment, it will remain faithful to man and follow him to life's end like the dog of Yudhishtira. Whatever the designs woven on the machine looms, screen printing, heliograph printing etc. handlooms still remain unsurpassed in weaving of designs pleasing to the eye and artistic to the core. Machine can only repeat what is once set but it is the deft fingers that guide and draw the fine shades of artistic beauty. Notwithstanding men's ability to create almost all that Natures's man can do, yet, he has to go a long way to produce Nature's man. If he does so, he is no longer the spark of God but God himself. In the designs, he copies to weave into the fabrics, we find he uproots all

kingdoms of Nature, to go into the weave of the fabric. The trees, the shrubs, the weeds, the creepers, the flowers wild and exotic, the fishes, the animals of the wild jungle, the reptiles and what not do figure in the patterns of the modern weave. There was earlier a distinction in design, and one can spot by the design whether the fabric displayed was tapestry material or material to drape the human body. Today, that distinction is fast disappearing. Look at the college boys, the fashion is to wear material that went by the name of curtain cloth but for its lightness. At a wayside station, a group of students returning from a tour, were perambulating and I was aghast to find a variety of curtains draping from hip below human forms moving enbloc.

The march of time and the step that textile industry has been keeping, no doubt, leave in our minds a picture of magnificient progress and man's ability to create wants and meet them. The fabric he has woven is indeed a fabric loudly proclaiming his prowess. But in the weave a yarn seems to have snapped and it is showing the slip. The snap of the yarn is a reminder that man in his vainglorious pursuit to imitate his creator and gloat that today there is nothing worth mentioning he cannot create has forgotten that there is yet a long long distance to go in this journey to reach God and that looking back he will realise that since Adam, the time of man is but a fraction of that eternal time and that he owes a deep debt of gratitude to the original Adam who ate the forbidden fruit at the bid of Eve and thereby created a need to be secretive.

Looking back, the modern man will perceive the vast devastation and denudation, he has been responsible for in this mad pursuit to satisfy human wants creating them himself and it will surely open his mind's eye to the state to which he is driving Nature to. Raped of its virginity and shred of its girdle, bowels ripped open in search for the golden egg, man no more creates but marches on keeping step with an expansionist programme to culminate not in the yield of golden eggs much sought after but killing the goose in the deed. Today, it all but requires a single bomb, his own creation to spell his doom. He knows and yet he does and this was the mystery what Yudhistira of Vyasa said in reply to the Swan from the pond.

Man is bound to realise in the near future, the textile fabric he weaves so wide and the yarn that he spins so long are but Nature's gift and his policies of expansion will soon leave him bereft of this gift and force him to his own destruction. Looking back, he will ponder over his own misdeeds and perhaps blame Adam and Eve for their action. For, in their action was born both the gift of discerning and the gift of secrecy. Secrecy shrouded spiritual knowledge and discerning gave man the consciousness of his own capacity. Secrecy threw a veil over his shortcomings and consciousness of his own capacity, created a vanity which blew itself baloon like thinning the walls, regardless of its capacity to hold the expanding air, even as the tissue fabric of his own creation does not bear his weight and snaps at the slightest tug or pressure.

Looking back, we should hope at least before the injury is deep set, he halts to take stock of the situation and soft pedals his own ambitious schemes in the imitation of the supereme being and awaken his slumbering spiritual consciousness and gear it up to action. "Arise, awake and stop not till the goal is reached" were the golden words of Vivekananda.

The goal is the rational and moral use of Nature's gifts, be it to adorn ourselves or else. The use, we make, whatever the gadget should not be wasteful and merely fanciful. As rational beings we should husband our resources and use them well enough to last a long time giving thought to the generations to come. By our act, we should not be instrumental to our doom. Textile industry, especially, the spinner of the yarn has to take good care and rationalise its programme, giving greater scope to the play of human ability in all that they make instead of turning on to the mere machine which cannot work by itself however remote or near the electronic control devices may be. Clothing must reach the poor and be utilatarian and the prices should not soar up but come down. There are many things it can do in a populous India and still progress materially in a democratic world with advances in Science. ★

The problems of this lustrous industry are discussed here frankly and enthusingly.

INDIAN WOOLLEN INDUSTRY

AMMU KRISHNASWAMY

Winter in Delhi means gardens in full bloom, sunny days and crisp cold nights. It is the time to feel cosy in woollens. In fact, in most parts of northern India one needs two different types dresses—cottons in summer and woollens in winter. But in large parts of the country woollen clothing is a luxury article. There might be at best a couple of blankets or 'kamblis' in a family say in Ernakulam or even Bombay—and these will be needed only by the old and ailing. The use of woollens is also restricted by geography and climate, and the per capita consumption of wool and woollen goods in India is only 1.8 inches. We produced 49,270 lakh yards of cotton cloth in 1958; the corresponding figure for wool was only 190 lakh yards.

Woollen textiles form only a part of the entire wool industry. The other important sectors are carpets and woollen hosiery. Textiles, in turn, are manufactured in large-sized mills or on power looms or even as a cottage industry. All the raw wool we produce in our country is not consumed by the industry. A large quantity is exported. This we have to do because we have a sizeable surplus and also because we have to import 'wool tops.' 'Wool tops' are what give a smooth finish to woollen suitings and other fabrics. 'Wool top' import has enabled us to manufacture woollen fabrics of quality within the country and curtail their import. The total value of woollen fabrics imported in 1958-59 amounted only to Rs. 15 lakh. The domestic manufacture enables us to meet the entire home demand and even export Rs. 97 lakh worth of woollen fabrics.

As explained previously the average yield of wool per sheep in our country is between half pound to four pounds per year, which is deplorably low. This wool is rough, and lacks uniformity and lustre. But it is very well suited for making carpets and druggets. The better quality is used in the manufacture of blankets, overcoating cloth, tweeds etc. Pashmina, which is the wool of Himalayan sheep, is used for shawls. Out of an annual production of 3,500 maunds of Pashmina wool we use 800 maunds, exporting the rest along with the raw wool.

Still the magic Carpet

Carpets are our best products in wool. Carpet-making is an organised industry, and has recently been revived and developed. There is good demand in international markets for carpets. Many of the fluffy carpets advertised colourfully in foreign journals are made

from the wool we export. This only shows that with proper organisation we can make such carpets ourselves. The brighter kinds of carpets, for which there is steady demand in America, requires the import of lustrous wool. But our best customer is the United Kingdom. Last year we sold carpets and floor rugs worth Rs. 2.75 crore to the U.K. We also exported Rs. 70 lakh worth each to Canada and U.S.A.

Other types of cottage products made of wool are the rough blankets used by the villagers; tweeds for coats and bundies, felt, and hair belting for machinery. These cottage industries provide employment to about 5 lakh people in the rural areas.

Socks and stockings

Practically the entire woollen hosiery manufacture of the country is concentrated in one town—Ludhiana. Of a total invested capital of Rs. 3.5 crore in this line, Ludhiana accounts for Rs. 3 crore. On a single shift the hosiery industry needs 12 million pounds of worsted wool per year. The machinery of this sector of the industry is capable of working on a 24-hour basis, which means that the production can be doubled or even trebled, if only there was demand. The demand for woollen hosiery, in its very nature, is seasonal.

The development of the woollen industry is therefore up against a problem. Either we have to import raw wool in addition to wool tops to keep the industry going, or we have to increase indigenous production of raw wool to at least twice the present output, and at the same time make a vigorous bid for larger foreign markets. Domestic demand cannot increase very greatly, but the Middle Eastern countries are a potential market. The Export Promotion Council has recommended that a delegation should be sent to these countries to study the market and establish contacts with individual importers.

Powerloom Woollens

Raw wool produced in our own country is sufficient for the manufacture of blankets required by our Defence services and hospitals Imported material is needed for the production of worsted woollen fabrics. Shortage of foreign exchange compels us to keep the import of 'wool tops' down to the minimum—just enough to keep the existing spindles and looms busy for one shift. At present we have nearly 1,30,000 spindles capable of producing 25.8 million lbs. of yarn on a double shift.

The question can rightly be asked: Can't we produce 'wool tops' in India? The Government has thought of it, and, as a longterm measure, has decided to start a wool combing plant in Calcutta. When it goes into full production it will be able to meet the entire demand of the wool industry from our own resources. But there are snags here too. A wool combing plant is easy to establish but it takes a long time for its workers to acquire enough technical skill in sorting, grading and blending wool.

Inferior types of woollen clothing known as 'shoddy,' are woven on powerlooms and also on handlooms. 'Shoddy' is made from waste products of the woollen industry, old clothing, rags and cuttings from the garment industry. Here too a certain percentage has to be imported but by and large 'shoddy' yarn is spun locally. In the last four or five years Amritsar has made great progress in the manufacture of 'shoddy,' of which floor rugs and blankets of the cheaper varieties are the most important products.

Development Council

In order to develop the woollen industry to its full potentialities as also promote sheep farming, the Government of India constituted a Development Council for Woollen Industry in 1955. The Council consists of 24 representatives representing all branches of the industry. The Council is also entrusted with the task of exploring foreign markets for Indian woollen goods. A number of its recommendations have already been put into effect.

Our exports have been increasing. Last year's figures show we have earned Rs. 8.73 crore from raw wool and 'shoddy,' Rs. 4.52 crore from carpets and rugs, and Rs. 0.97 crore from woollen manufacturers, making a total of Rs. 14.22 crore. While exports are going up, our imports are decreasing. What we do import now represents the basic quantity necessary to keep our industry going.

There still remain several problems which cramp the industry. Our mills do not have the latest types of machinery. Even the present machines are not utilised to the full. The reason, as we saw, is that our entire requirements of woollen goods are met by just working one shift in these mills, in addition, of course, to the manufacture of woollen goods on the cottage industry basis. The spindles and looms of woollen mills are often put on to cotton and rayon textiles. This may be an expedient, but it is no solution.

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